

PROJECT DESCRIPTION
GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF US 50 AT CHURCH CREEK ROAD/HERON BLVD. IN DORCHESTER COUNTY. US 50 IS CONSIDERED TO RUN IN AN EAST/WEST DIRECTION.

VIDEO DETECTION CAMERAS, AUDIO PEDESTRIAN EQUIPMENT, AND CROSSWALKS ON THE SOUTH AND EAST LEGS OF THE INTERSECTION ARE TO BE INSTALLED.

INTERSECTION OPERATION

THE EXISTING CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE UTILIZED AT THIS LOCATION. THE INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 6 NEMA PHASES. THERE IS AN EXCLUSIVE LEFT TURN PHASE FOR THE EAST AND WESTBOUND MOVEMENTS OF US 50. THE US 50 THROUGH MOVEMENTS OPERATE CONCURRENTLY. A CONCURRENT PEDESTRIAN MOVEMENT ACROSS THE SOUTH LEG OF THE INTERSECTION WILL BE ADDED. THE CHURCH CREEK ROAD/HERON BLVD MOVEMENTS OPERATE IN A SIDE STREET SPLIT MODE. AN ACTUATED PEDESTRIAN MOVEMENT ACROSS THE EAST LEG OF THE INTERSECTION WILL BE ADDED.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

PROJECT CONTACTS:

MR. KEN CIMINO, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 677-4045
MR. GREG HOLSEY, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: (410) 677-4020
MR. WAYNE WEICHMANN, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 677-4010
MR. BRUCE POOLE, UTILITY ENGINEER
PHONE: (410) 677-4082
MR. EDWARD RODENHIZER, SIGNAL OPERATIONS
PHONE: (410)-787-7652

2. ALL INTERNAL CABINET WIRING SHALL BE PERFORMED BY THE SHA SIGNAL SHOP. CONTRACTOR SHALL CONTACT ED RODENHIZER 72 HOURS PRIOR TO CONSTRUCTION.

3. APS WILL FUNCTION AS FOLLOWS:

FOR US 50 (OCEAN GATEWAY) AT CHURCH CREEK ROAD AND HERON BOULEVARD
A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS OCEAN GATEWAY AT CHURCH CREEK AND HERON, WAIT, CROSSWALK ANGLES RIGHT".
B. WHEN WALK PHASE BEGINS, THE AUDIBLE SOUND WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

FOR CHURCH CREEK ROAD
A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS CHURCH CREEK AT OCEAN GATEWAY, WAIT".
B. WHEN WALK PHASE BEGINS, THE AUDIBLE SOUND WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE STATE HIGHWAY ADMINISTRATION.
NONE.

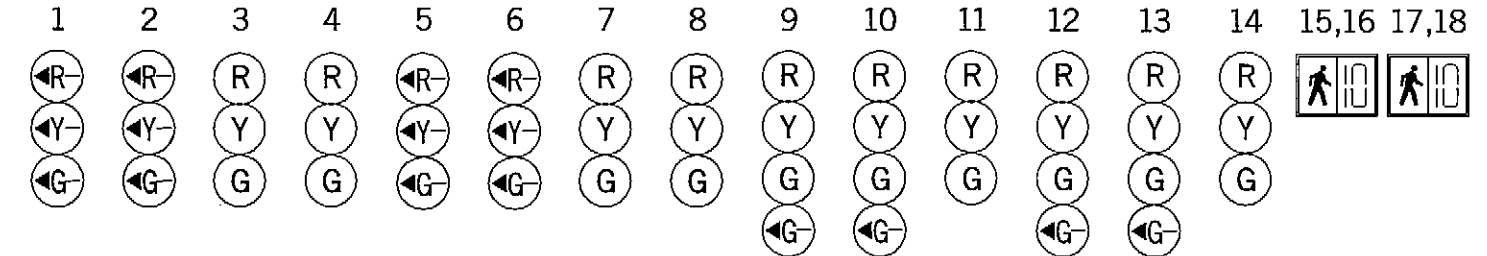
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

QUANTITY	UNITS	DESCRIPTION	QUANTITY	UNITS	DESCRIPTION
LUMP SUM	LS	MAINTENANCE OF TRAFFIC	465	LF	2-CONDUCTOR CABLE (NO. 14 AWG)
LUMP SUM	LS	MOBILIZATION	485	LF	5-CONDUCTOR CABLE (NO. 14 AWG)
4	CY	TEST PIT EXCAVATION	40	LF	3 IN. PVC CONDUIT [SCHEDULE 80] - TRENCHED
4	EA	10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE	2.8	CY	CONCRETE FOUNDATION FOR TRAFFIC SIGNAL EQUIPMENT
4	EA	VIDEO DETECTOR CAMERA (ECONOLITE TERRA TYPE)	4	EA	GROUND ROD - 3/4" X 10 FT. LENGTH
1040	LF	TERRA VIDEO DETECTOR CAMERA CABLE	400	LF	12 IN. WHITE THERMOPLASTIC PAVEMENT MARKING - CROSSWALK
4	EA	AUDIBLE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH PUSHBUTTON SIGN	105	LF	24 IN. WHITE THERMOPLASTIC PAVEMENT MARKING - STOP LINE
1	EA	APS 2-WIRE CENTRAL CONTROL UNIT	110	LF	REMOVE EXISTING PAVEMENT MARKING BY GRINDING
4	EA	16 IN. 1-SECTION, 1-WAY LED (COUNTDOWN) PEDESTRIAN SIGNAL HEAD - POST TOP	LUMP SUM	LS	REMOVE EXISTING SIGNAL EQUIPMENT
2	EA	NEMA LOAD SWITCH (TO BE INSTALLED BY SHA)			

GENERAL NOTES

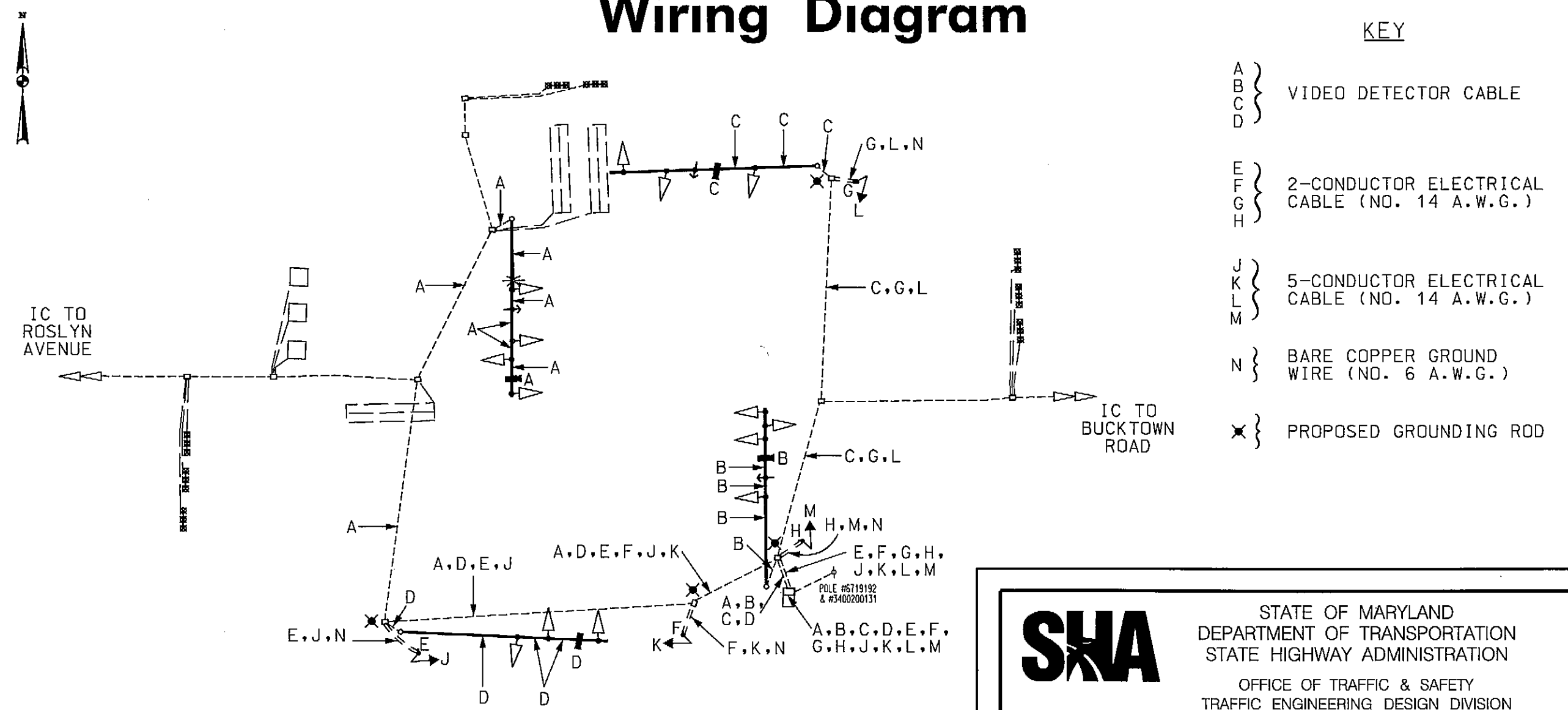
- VIDEO CAMERA LOCATION/ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
- THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
- PAVEMENT MARKINGS DETAILED ARE PROPOSED AND ARE TO BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH MD-SHA STANDARDS. ALL OTHER PAVEMENT MARKINGS ARE TO BE CONSIDERED AS EXISTING.
- GEOMETRICS SHALL BE CONFIRMED PRIOR TO THE INSTALLATION OF SIGNAL EQUIPMENT. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
- ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC AND ARE NOT TO BE CONSIDERED COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE PROJECT ENGINEER IMMEDIATELY.
- PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18 IN. FROM A 60 IN. x 60 IN. LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
- THE 10 FT. SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
- PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
- THE LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 & FIG 4E-2 AND THE NCHRP PUBLICATION. "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE". IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERING APS EQUIPMENT FOR PROGRAMING TO MD-SHA SIGNAL SHOP.
- ALL UNUSED CABLE SHALL BE REMOVED.
- PROPOSED RAMP TO BE CONSTRUCTED ACCORDING TO THE "PAIRED COMBINATION RAMP WITH MINIMAL SEPARATION ON SHORT RADIUS" STANDARD SPECIFIED IN THE "SHA ACCESSIBILITY POLICY & GUIDELINES FOR PEDESTRIAN FACILITIES ALONG STATE HIGHWAYS" (JUNE 2010) PAGE 43.

Phase Chart



PHASE 1 AND 5	←G-←G-	R	R	←G-←G-	R	R	R	R	R	R	R	R	R	R	DW	DW	
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																	
PHASE 1 AND 6	←G-←G-	G	G	←R-←R-	R	R	R	R	R	R	R	R	R	R	DW	DW	
1 CHANGE	←Y-←Y-	G	G	←R-←R-	R	R	R	R	R	R	R	R	R	R	DW	DW	
PHASE 2 AND 5	←R-←R-	R	R	←G-←G-	G	G	R	R	R	R	R	R	R	R	DW	DW	
5 CHANGE	←R-←R-	R	R	←Y-←Y-	G	G	R	R	R	R	R	R	R	R	DW	DW	
PHASE 2 AND 6	←R-←R-	G	G	←R-←R-	G	G	R	R	R	R	R	R	R	R	WK	DW	
PED CLEARANCE	←R-←R-	G	G	←R-←R-	G	G	R	R	R	R	R	R	R	R	FLDW	DW	
2 AND 6 CHANGE	←R-←R-	Y	Y	←R-←R-	Y	Y	R	R	R	R	R	R	R	R	DW	DW	
PHASE 3	←R-←R-	R	R	←R-←R-	R	R	←G-←G-	G	G	R	R	R	R	R	DW	DW	
3 CHANGE	←R-←R-	R	R	←R-←R-	R	R	Y	Y	Y	R	R	R	R	R	DW	DW	
PHASE 4	←R-←R-	R	R	←R-←R-	R	R	R	R	R	R	←G-←G-	G	G	R	DW	DW	
4 CHANGE	←R-←R-	R	R	←R-←R-	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	
PHASE ALT 4	←R-←R-	R	R	←R-←R-	R	R	R	R	R	R	←G-←G-	G	G	R	DW	WK	
PED CLEARANCE	←R-←R-	R	R	←R-←R-	R	R	R	R	R	R	←G-←G-	G	G	R	DW	FLDW	
ALT 4 CHANGE	←R-←R-	R	R	←R-←R-	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	
PRE EMPT (PHASE 2 & 5)	←R-←R-	R	R	←G-←G-	G	G	R	R	R	R	R	R	R	R	DW	DW	
PRE EMPT (PHASE 2 & 5) CHANGE	←R-←R-	R	R	←Y-←Y-	G	G	R	R	R	R	R	R	R	R	DW	DW	
PRE EMPT (PHASE 1 & 6)	←G-←G-	G	G	←R-←R-	R	R	R	R	R	R	R	R	R	R	DW	DW	
PRE EMPT (PHASE 1 & 6) CHANGE	←Y-←Y-	G	G	←R-←R-	R	R	R	R	R	R	R	R	R	R	DW	DW	
PRE EMPT (PHASE 4)	←R-←R-	R	R	←R-←R-	R	R	R	R	R	R	←G-←G-	G	G	R	DW	DW	
PRE EMPT (PHASE 4) CHANGE	←R-←R-	R	R	←R-←R-	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	
FLASHING OPERATION	←R-←R-	FL/Y	FL/Y	←R-←R-	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	

Wiring Diagram



SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

US 50 AT CHURCH CREEK ROAD/HERON BLVD
CAMBRIDGE, MARYLAND

GENERAL INFORMATION PLAN

SCALE	NA	DATE	AUGUST 23, 2010	CONTRACT NO.	BW996M82
DESIGNED BY	FJH/FDB	COUNTY	DORCHESTER		
DRAWN BY	FJH/FDB	LOGMILE	06006002.29		
CHECKED BY	FJH/FDB	TIMS NO.	K-340		
F.A.P. NO.	NA	TOD NO.			
TS NO. 1609H	DRAWING	GI-01	OF 01	SHEET NO.	2 OF 2

The Traffic Group, Inc.
Suite H
9900 Franklin Square Drive
Baltimore, Maryland 21236
410-931-6600
1-800-583-8411
Fax 410-931-6601
"Merging Innovation and Excellence"®

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